



*Region 6: San Jacinto  
Flood Planning Group*

*May 13, 2021*

*9:00 am*

*Virtual Meeting*



# Item 1: Call to Order



## **Item 2:** Welcome and Roll Call



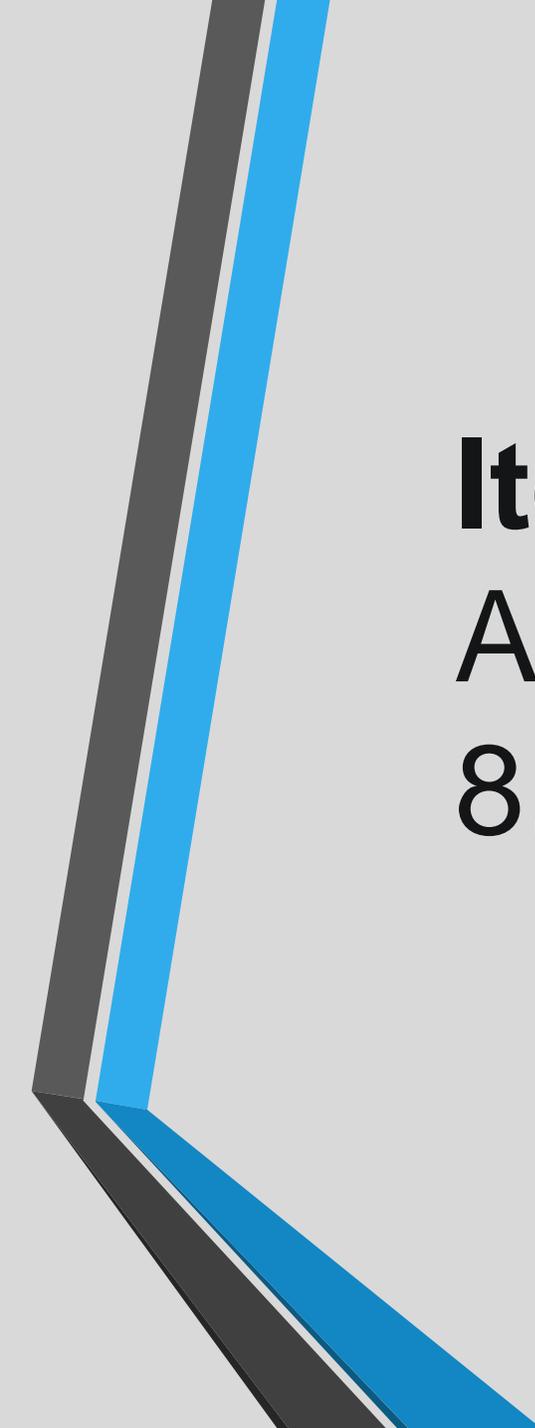
## **Item 3:**

Texas Water Development Board  
Update



**Item 4:**

Registered Public Comments on  
Agenda Items 5-19  
(limit of 3 minutes per person)



## **Item 5:**

Approval of minutes from the April  
8, 2021 SJRFPG Meeting

**Meeting Minutes**  
**Region 6 San Jacinto Regional Flood Planning Group Meeting**  
**April 8, 2021**  
**9:00AM**  
**CISCO WebEx Virtual Meeting**

**Roll Call:**

<b>Voting Member</b>	<b>Interest Category</b>	<b>Present (x) / Absent ( ) / Alternate Present (*)</b>
Russ A. Poppe	<i>Chair, Flood Districts</i>	X
Alia Vinson	<i>Vice Chair, Water Districts</i>	X
Alisa Max	<i>Secretary, Counties</i>	X
Gene Fisseler	<i>At-Large, Public</i>	X
Matthew Barrett	<i>At-Large, River Authorities</i>	X
Elisa Macia Donovan	<i>Agricultural Interests</i>	X
Jenna Armstrong	<i>Small Business</i>	X
Paul E. Lock	<i>Electric Generating Utilities</i>	X
Sarah P. Bernhardt	<i>Environmental Interests</i>	X
Stephen Costello	<i>Municipalities</i>	X
Timothy E. Buscha	<i>Industries</i>	X
Todd Burrer	<i>Water utilities</i>	X

<b>Non-voting Member</b>	<b>Agency</b>	<b>Present(x)/Absent( ) / Alternate Present (*)</b>
Bill Adams	Texas Parks and Wildlife Department	
Natalie Johnson	Texas Division of Emergency Management	
Kristin Lambrecht	Texas Department of Agriculture	X
Joel Clark	Texas State Soil and Water Conservation Board	X Alternate
Ellen Kinsey	General Land Office	X Alternate
Megan Ingram	Texas Water Development Board	X Alternate
Kelly Mills	Texas Commission on Environmental Quality	X
Jeff Taebel	Houston-Galveston Area Council	X
Ellie Alkhoury	Texas Department of Transportation	X Alternate
Tom Heidt	Port Houston	
Michael Turco	Harris-Galveston Subsidence District	X
Brandon Wade	Region H	X

<b>Liaisons</b>	<b>Agency</b>	<b>Present(x)/Absent( ) / Alternate Present (*)</b>
Mark Vogler	Lower Brazos	X
Todd Burrer	Trinity Region	X
Timothy Buscha	Neches Region	X
Michael Turco	Lower Brazos	X
Brandon Wade	Region H	X

**Quorum:**

Quorum: **Yes**

Number of voting members or alternates that were present: 12

Number required for quorum per current voting membership of 12: 7

Alfred Garcia	Kristin Lambrecht
Amanda Fuller	Laura Atlas
Andy Palermo	Laura Norton
Arsum Pathak	Liz Haselbach
Ashley Poe	Maggie Puckett
Brian Koch	Matt Lopez
Brooke Bacuetes	Michael Keck
Clarissa Perez	Michael Reedy
Colleen Jones	Michael Turco
Cory Stull	Neil Gaynor
Danielle Goshen	Paul Lock
Donald Martin	Rebecca Andrews
Fatima Berrios	Reem Zoun
Glenna Sloan	Reid Mrsny
James Bronikowski	Robert Kosar
Jill Boullion	Stephanie Griffin
Justin Bower	Terry Barr
Kena Ware	Tiffany
Krista Melnar	Unknown: 11

**\*\*Meeting attendee names were gathered from those who entered information on the GoToWebinar meeting.**

*All meeting materials were available for the public at:*

<http://www.twdb.texas.gov/flood/planning/regions/schedule.asp>.

**AGENDA ITEM NO. 1: Call to Order**

Mr. Poppe, Chair of the SJRFPG, called the meeting to order at 9:03 AM and welcomed all attendees.

**AGENDA ITEM NO. 2: Welcome and Roll Call**

Ms. Max, Secretary of the SJRFPG, took roll call and a quorum was established.

**AGENDA ITEM NO. 3: Texas Water Development Board Update**

Mr. Bronikowski, on behalf of the TWDB, stated that the Regional Flood Plan grant agreement had been submitted to Harris County for approval. He also stated the TWDB had received significant comments on their Technical Guidelines Document and anticipated to have a final version by the end of April. Lastly, he stated TWDB will have a Contract Management Kick-off meeting on April 21, 2021.

**AGENDA ITEM NO. 4: Registered Public Comments on Agenda Items 5-19 (limit of 3 minutes per person)**

No written comments were received. The verbal comments given during this meeting are as follows:

- a) Neil Gaynor-One Water Task Force- Mr. Gaynor expressed his gratitude for the addition of the Upper Watershed Category. He then proceeded to highlight the challenges for the region.

**AGENDA ITEM NO. 5: Approval of minutes from the March 11, 2020 SJRFPG Meeting**

After minor corrections were suggested, Ms. Vinson moved to approve the minutes as corrected. Ms. Max seconded, which carried unanimously.

**AGENDA ITEM NO. 6: Announcement of new Alternate Members and new Non-Voting Members**

- Jill Boullion was named as Sarah Bernhardt's alternate.
- Andy Palermo was named as Tim Buscha's alternate.
- Brandon Wade was named as the new liaison and non-voting member from Region H.

**AGENDA ITEM NO. 7: Update from Executive Committee, discussion, and possible action from Regional Flood Planning Group Members for the Coastal Communities and Public Categories**

Mr. Poppe summarized that the Executive Committee had gone into executive session and shortlisted 30-40% of the applicants for interviews. He stated that interviews would be performed in the next Executive Committee meeting during an executive session.

**AGENDA ITEM NO. 8: Update and discussion for the addition of new voting and non-voting members/member categories, and update on current solicitation efforts for the Upper Watershed Category.**

Ms. Berrios provided an update stating that applications for the Upper Watershed voting position had been received to date, and re-stated that the application deadline is May 7th.

Mr. Poppe also stated that he would recommend not adding any additional voting member categories until all open solicitations were filled. Ms. Max concurred.

**AGENDA ITEM NO. 9: Liaison Reports pertaining to other region(s) progress and status:**

- a. **Trinity Region** - Mr. Burrer stated that Region 3 selected Halff Associates as their technical consultant. He also stated the region established their organizational structure and would provide it to Region 6 once he had a finalized copy.
- b. **Neches Region** – Mr. Buscha stated that Region 5 selected Freese and Nichols with HDR as their technical consultant. He also stated that a working committee would be provided to help with project management of Freese and Nichols. He stated there had been no changes in the group voting membership, however Region 5 had selected Liz Haselbach as their liaison to Region 6. Lastly, he mentioned Region 5 discussed the TWDB Technical Guidelines Document extensively and had provided feedback.
- c. **Lower Brazos Region** – Mr. Turco stated that Region 8 selected Halff Associates as their technical consultant and was moving along similar to Region 6.
- d. **Lower Brazos Region** – Mark Vogler was not present during this time to provide updates, but was present later in the meeting.
- e. **Region H Regional Water Planning Group** – Mr. Wade introduced himself and stated Region H was moving into their next 5-year planning cycle.

**AGENDA ITEM NO. 10: Discussion and possible action concerning public engagement strategies including organizing and setting a future date for a public meeting as required by Texas Water Code §16.062(d) and 31 Texas Administrative Code §361.12(a)(4):**

Mr. Poppe stated that the Harris County Flood Control District (HCFCD) plans to hold the public meeting mid-May in order to meet the posting requirements and recommended the meeting be held during the evening. He then stated he was willing to be the speaker and suggested another voting member could assist. Ms. Armstrong agreed.

Ms. Vinson suggested that Ms. Max, as the project sponsor, would be a better cohost for Mr. Poppe. Ms. Max agreed to assist.

Ms. Donovan asked if the new Public voting member will be present. Ms. Max stated that it would be possible to have them in attendance, however it would have to be the latter part of May. Discussion ensued.

Ms. Bernhardt asked if the first meeting would be a virtual meeting and Mr. Poppe confirmed it would be. Ms. Max stated that if more than half of the members are present it would become a public meeting and would require posting.

**AGENDA ITEM NO. 11: Update and discussion pertaining to the logistics of in-person RFPG meetings**

Mr. Poppe stated there still had not been any directives on when in-person meetings would be required, however he wanted to discuss potential physical meeting locations to ensure a plan for

in-person was prepared. Ms. Max then stressed the importance of the posting requirements and discussed some approaches to this matter, which could include a hybrid approach.

Ms. Vinson agreed and suggested that one meeting location should be selected initially. She then mentioned the importance for a meeting location with ample space to allow social distancing, effective technology, and adequate parking. She stated the SJRFPG should prepare to be flexible once the directive is given by the Governor to return to in-person meetings.

Mr. Fisseler and Mr. Buscha suggested some locations that they believed met all the suggested requirements. Ms. Max followed by stating all potential locations should be emailed to the SanJacFldPG@eng.hctx.net and Mr. Poppe agreed.

There was a consensus that a central location would be best, however Mr. Poppe encouraged suggestions from the SJRFPG.

**AGENDA ITEM NO. 12: Discussion and update to the SJRFPG concerning development of media request guidance including social media outreach**

Mr. Poppe stated that the HCFCD communications team had been working on this, however he stated with the consultant being so close to being hired, his team had recommended waiting until the consultant was hired to develop a media guidance document.

**AGENDA ITEM NO. 13: Update from Executive Committee, discussion, and possible action concerning technical consultant selection, and grant status from TWDB, and/or Planning Group Sponsor**

Ms. Max gave a brief overview stating the grant agreement had been received and was on the Harris County Commissioners Court agenda for approval. She also stated the Consultant Selection Group had made a recommendation for the technical consultant. She stated there would be an additional SJRFPG meeting to have the voting members approve the recommended consultant. She then informed the SJRFPG members that the Planning Group Sponsor would be allowed to distribute all the SOQ proposals if the interested members signed confidentiality forms.

Ms. Vinson then asked for clarification as to whether SJRFPG would also have to approve the contract and Ms. Max answered no that the SJRFPG would only need to approve the consultant selection.

Ms. Max then stated the recommended consultant could be viewed on the Commissioner Court Agenda the following day – April 9, 2021. Ms. Berrios confirmed the Planning Group Sponsor would distribute the information when posted and made available to the public.

**AGENDA ITEM NO. 14: Update and discussion from the Planning Group Sponsor (Harris County) regarding project schedule and budget.**

Ms. Max stated that the Planning Group Sponsor was on schedule and the grant agreement was moving along as intended.

**AGENDA ITEM NO. 15: Discussion and possible action concerning development of a coordination framework between TWDB, Region 6 RFPG and GLO regarding ongoing and parallel flood project planning efforts.**

Mr. Poppe stated that after meeting with TWDB and GLO he felt that the potential duplicity of work was less of a concern. He stated that the timelines of GLO and SJRFPG were different, with the GLO timeline being longer. He then stated that the efforts from GLO would be supplemental to the SJRFPG Regional Flood Plan and that coordination between SJRFPG, TWDB and GLO should continue.

Ms. Colleen Jones concurred stating their efforts would go until June 2024 and that GLO would be happy to give the presentation to the whole SJRFPG.

Ms. Max then mentioned the possibility of establishing a charter to ensure no duplicate efforts.

*Mr. Poppe then offered a 10-minute recess. Recess began at 10:20 AM and ended at 10:30 AM.*

**AGENDA ITEM NO. 16: Presentation from the Texas Living Waters Project - Nature-Based Solutions for Flood Mitigation: An Overview for Region 6 RFPG**

The presentation was given by Danielle Goshen, Water Policy and Outreach Specialist of the Galveston Bay Foundation, along with Dr. Arsum Pathak, Adaptation and Coastal Resilience Specialist from the Texas Coast and Water Program National Wildlife Federation. The presentation focused on examples of nature-based solutions, their importance and benefits, cost effectiveness and equity considerations. The presentation highlighted several case studies that included: Greens Bayou, Brays Bayou, Exploration Green and Katy Prairie.

Mr. Poppe then thanked the presenters and indicated how Harris County Flood Control District has incorporated nature-based solutions to enhance flood mitigation structural solutions. Mr. Fisseler concurred stating that in his career he had always tried to incorporate and imitate nature in his projects. Ms. Max also agreed and further confirmed that the SJRFPG would incorporate nature-based solutions as highlighted in the Texas Administrative Code (TAC).

Mr. Donovan then cautioned that the SJRFPG should make sure to properly describe nature-based solutions as defined in the TAC, as they could be easily misinterpreted and not correctly defined. Ms. Goshen and Dr. Pathak agreed and clarified they had a document that clearly highlighted what would qualify as green infrastructure. Discussion ensued.

**AGENDA ITEM NO. 17: Presentation of 2021 Planning Group key dates and deadlines**

- a) Upcoming planning schedule milestones.
- b) The next San Jacinto RFPG meeting will be on April 15, 2021 at 2:00 pm for the approval of the selected consultant. The next regular San Jacinto RFPG meeting will be May 13, 2021 at 9:00 am.
- c) The next Executive Committee meeting will be May 7, 2021 at 12:00 pm.

**AGENDA ITEM NO. 18: Reminder regarding Planning Group member training on Public Information Act and Open Meetings Act**

Mr. Poppe reminded that all SJFRPG members, including alternates, need to complete the Public Information Act and Open Meetings Act training as soon as possible.

**AGENDA ITEM NO. 19: Consider agenda items for next meeting**

- Proposals of new voting members for the Public and Coastal Communities voting member categories
- Introduction of selected technical consultant
- Consideration for committee(s) formations to support the consultant
- Update on solicitation efforts for Upper Watershed voting member
- Update and discussion regarding physical meeting location
- Update on pre-planning public meeting to solicit public comments for Regional Flood Plan
- Update on schedule and budget
- Presentation from HCFCD – San Jacinto Regional Watershed Master Drainage Plan
- Liaison reports
- Recommendation to remove the “new voting member” agenda item from the agenda

**AGENDA ITEM NO. 20: Public comments – limit 3 minutes per person**

No comments were received.

**AGENDA ITEM NO. 21: Meeting Adjourn**

Mr. Poppe adjourned the meeting at 11:26 AM.

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Alisa Max, Secretary

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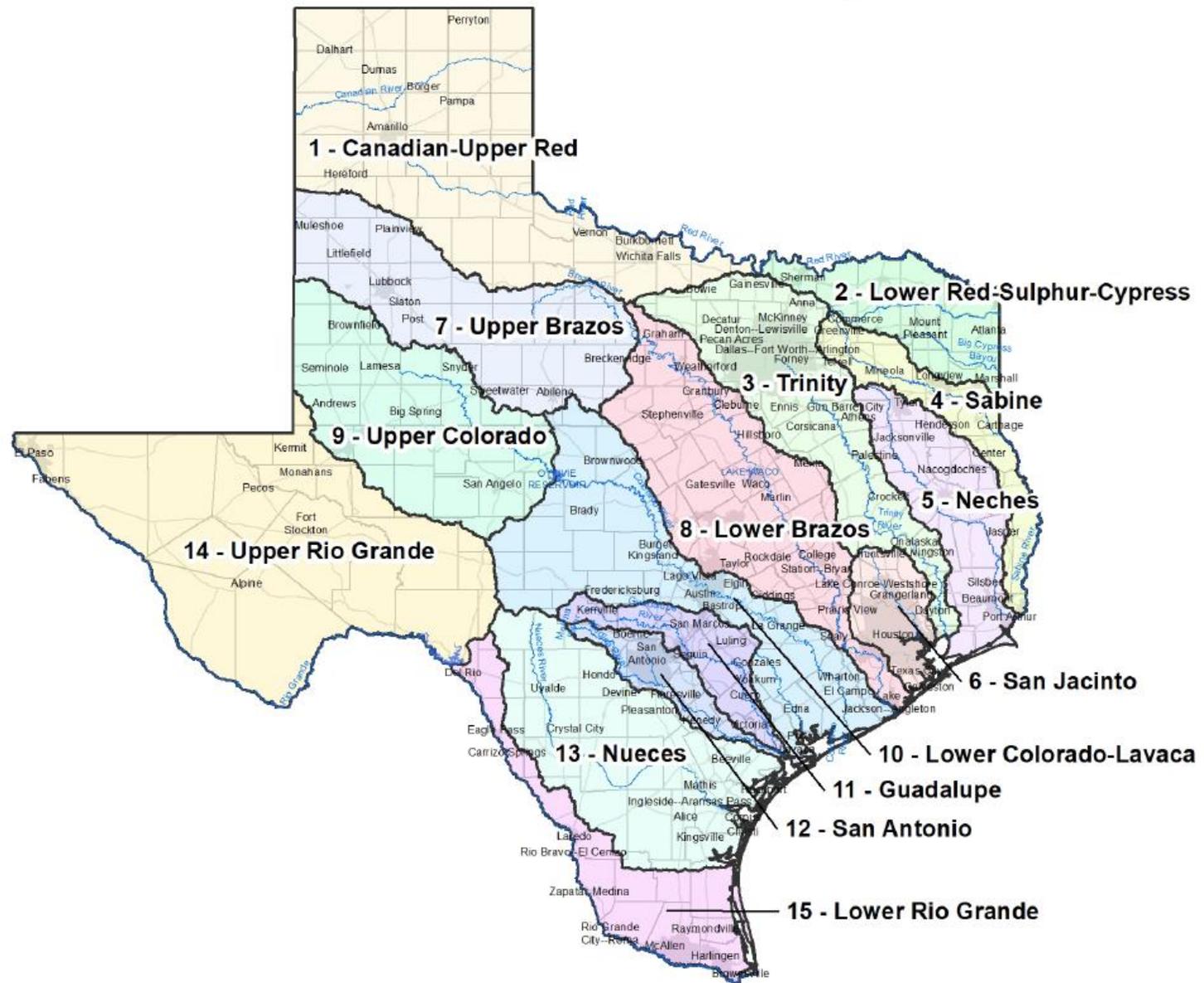
Russ Poppe, Chair



## **Item 6:**

Announcement of new Alternate Members and new Non-Voting Members

# Flood Planning Region Boundaries

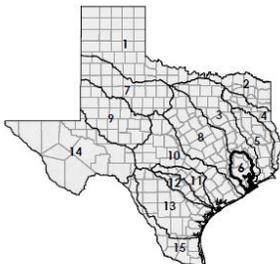
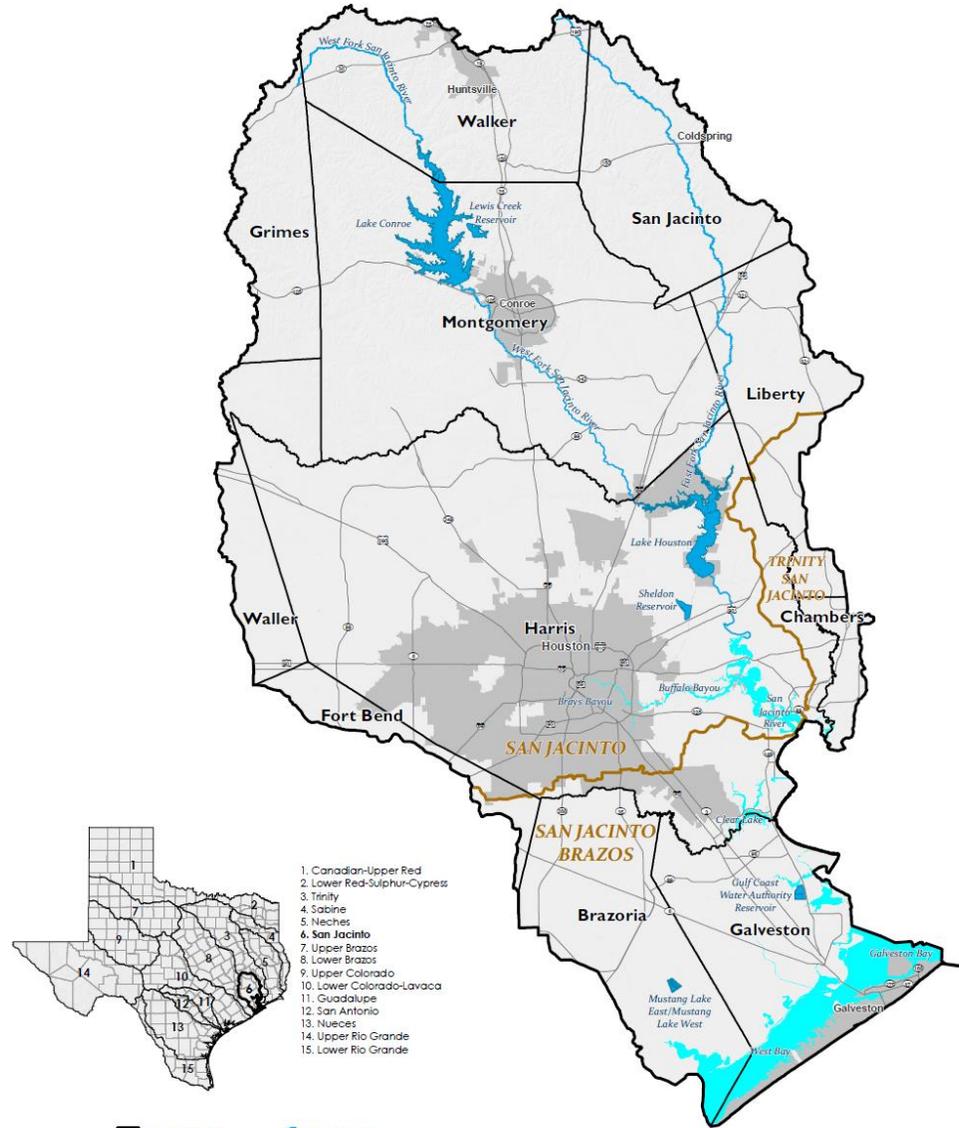


## Legend

- Major Roadways
- Major Rivers
- Major Reservoirs
- Flood Planning Region Boundaries**
- Canadian-Upper Red
- Guadalupe
- Lower Brazos
- Lower Colorado-Lavaca
- Lower Red-Sulphur-Cypress
- Lower Rio Grande
- Neches
- Nueces
- Sabine
- San Antonio
- San Jacinto
- Trinity
- Upper Brazos
- Upper Colorado
- Upper Rio Grande
- County Boundaries
- Urbanized Areas



# Flood Planning Region - 6 - San Jacinto



1. Canadian-Upper Red
2. Lower Red-Sulphur-Cypress
3. Trinity
4. Sabine
5. Neches
6. San Jacinto
7. Upper Brazos
8. Lower Brazos
9. Upper Colorado
10. Lower Colorado-Lavaca
11. Guadalupe
12. San Antonio
13. Nueces
14. Upper Rio Grande
15. Lower Rio Grande

County boundaries  
 Major river basin boundaries  
 Major roadways  
 Major reservoirs  
 Major rivers  
 County seats

DISCLAIMER: This map was generated by the Texas Water Development Board using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the information shown herein nor to its suitability for a particular use. The scale and location of all mapped data are approximate. Map date: 05/01/2020



Texas Water Development Board  
 1700 North Congress Avenue, Austin, TX 78701  
[www.twdb.texas.gov](http://www.twdb.texas.gov) @twdb - facebook.com/twdbboard

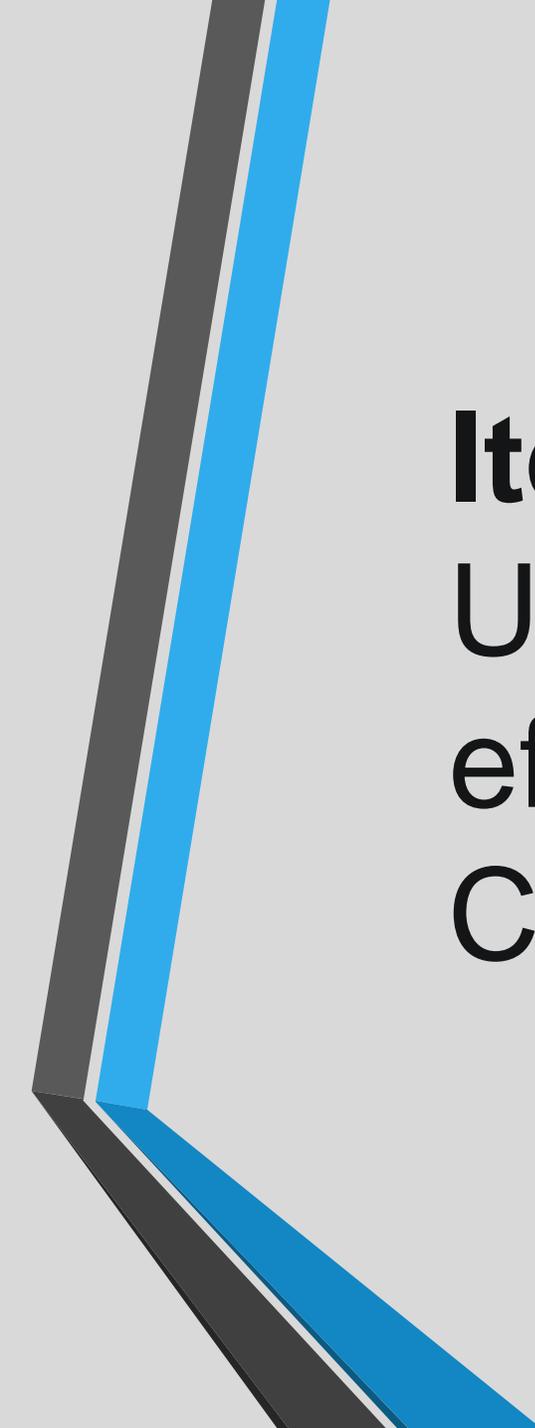




## **Item 7:**

Update from Executive Committee, discussion, and possible action from Regional Flood Planning Group Members for the Coastal Communities and Public voting membership. The SJRFPG may go into an executive session pursuant to chapter 551 of the Texas Government Code for the consideration of personnel matters, specifically, persons being considered for appointment as new voting members of SJRFPG. \*\*

***\*\*The San Jacinto Regional Flood Planning Group may go into executive session, if necessary, pursuant to chapter 551 of the Texas Government Code, for one or more of the following reasons: (1) consultation with the County Attorney to seek or receive legal advice or consultation regarding pending or contemplated litigation; (2) discussion about the value or transfer of real property; (3) discussion about a prospective gift or donation; (4) consideration of specific personnel matters; (5) discussion about security personnel or devices; or (6) discussion of certain economic development matters. The San Jacinto Regional Flood Planning Group may announce that it will go into executive session on any item listed on this agenda if the subject matter is permitted for a closed session by provisions of chapter 551 of the Texas Government Code.\*\****



## **Item 8:**

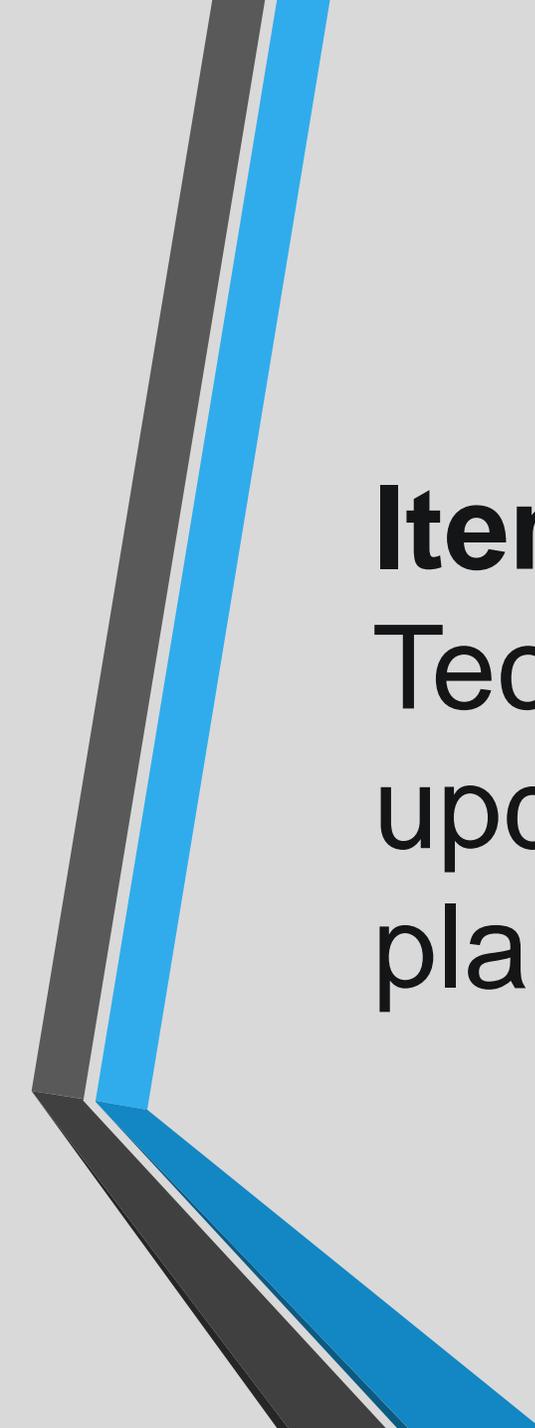
Update on current solicitation efforts for the Upper Watershed Category



## **Item 9:**

Liaison Reports pertaining to other region(s) progress and status:

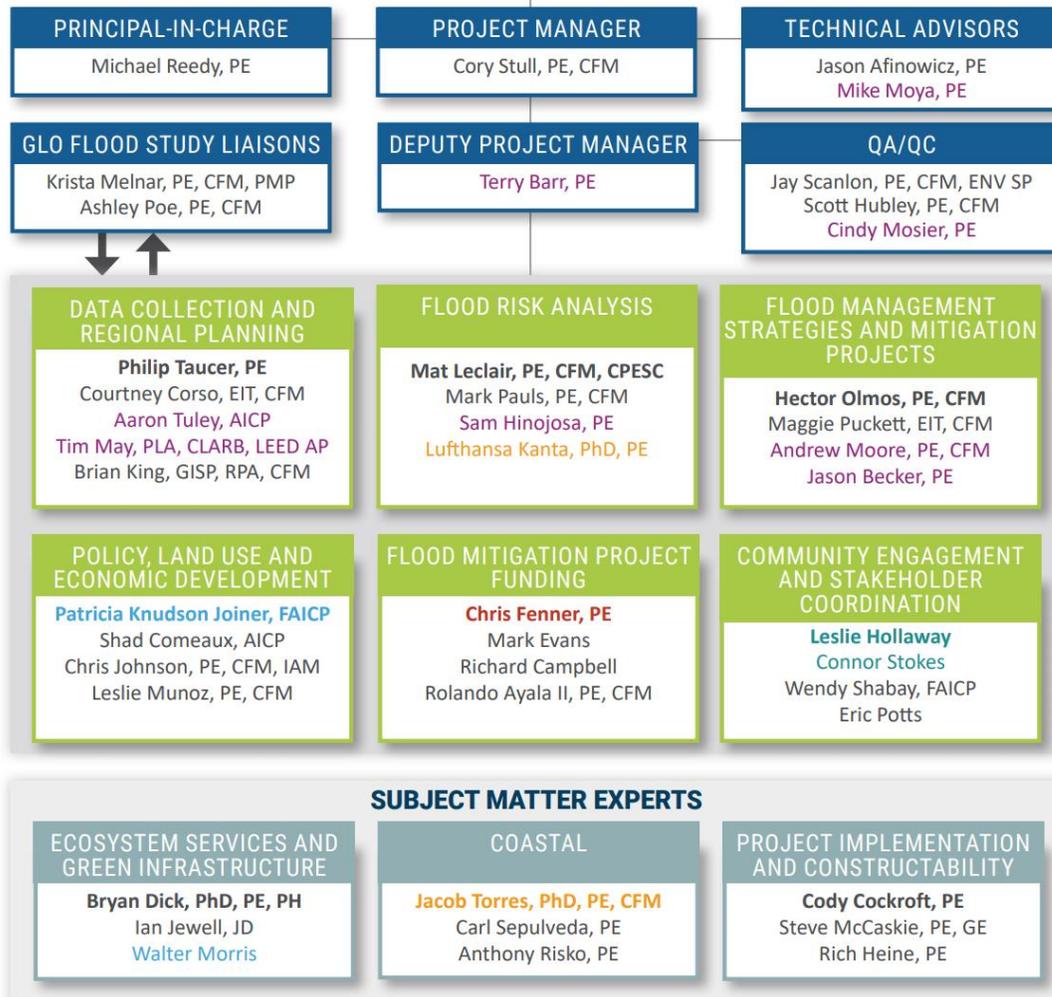
- a. Trinity Region
- b. Neches Region
- c. Lower Brazos Region
- d. Region H Water



**Item 10:**

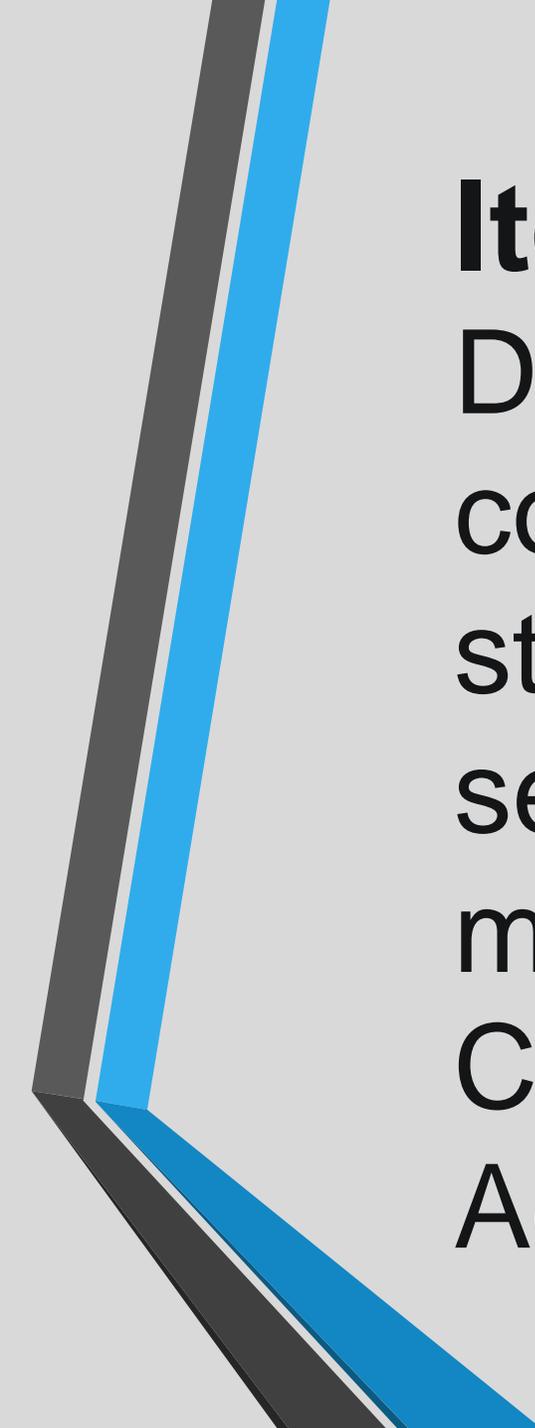
Technical Consultant introduction and updates pertaining to the regional flood planning process

## Region 6. San Jacinto Regional Flood Planning Group



- Halff Associates, Inc.
- Hollaway Environmental + Communications Services, Inc.
- Knudson LP
- Torres & Associates, LLC
- Stuart Consulting Group





## **Item 11:**

Discussion and possible action concerning public engagement strategies including organizing and setting a future date for a public meeting as required by Texas Water Code §16.062(d) and 31 Texas Administrative Code §361.12(a)(4)



SAN JACINTO REGIONAL FLOOD PLANNING GROUP

**R E G I O N 6**

## Pre-Planning Meeting

**Tuesday, May 18**

**6:30 pm - 7:30 pm**

Virtual Meeting: [hcfcd.org/regfloodplan](https://hcfcd.org/regfloodplan)

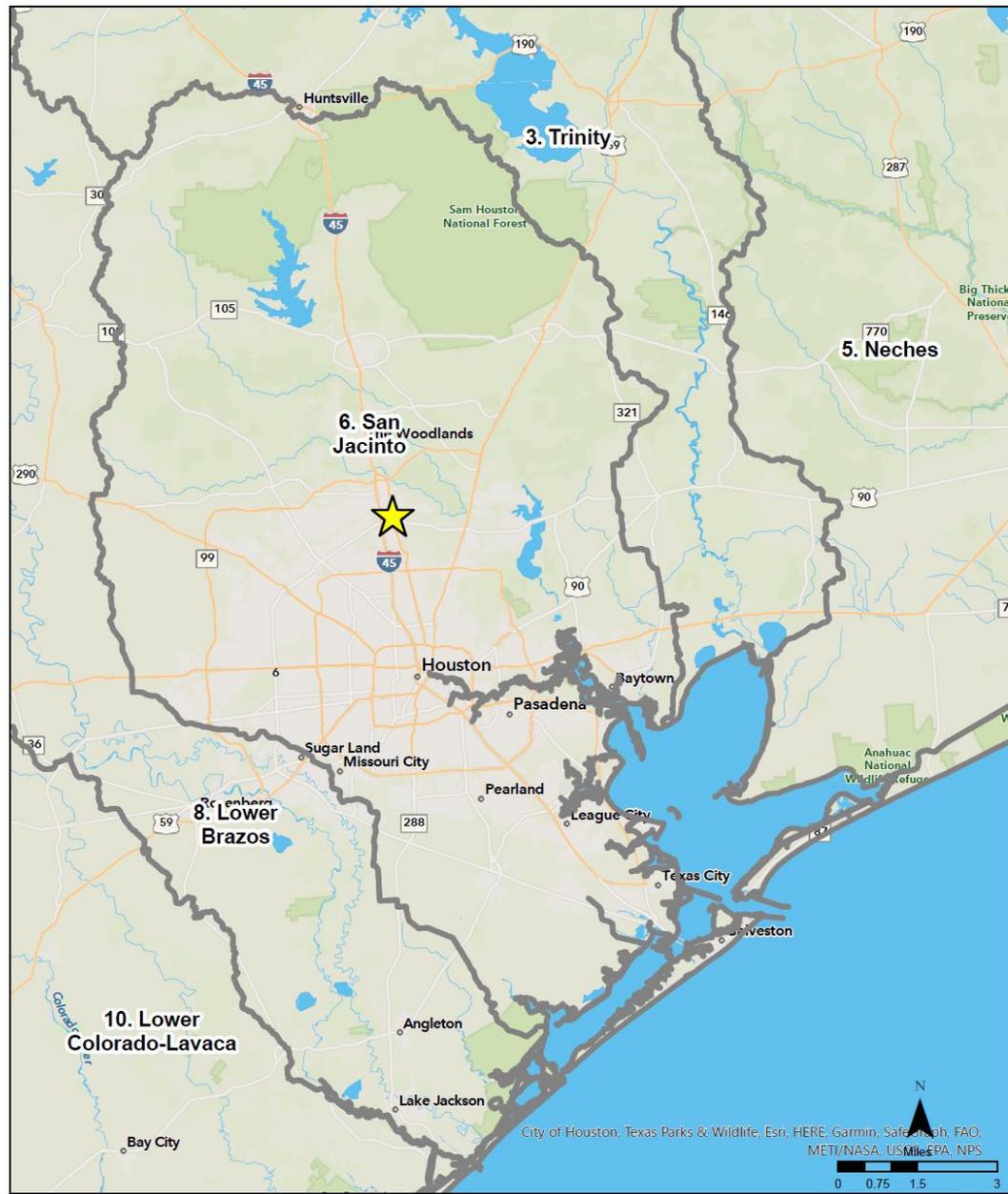
Join the San Jacinto Regional Flood Planning Group and let us know your thoughts for our regional flood plan!

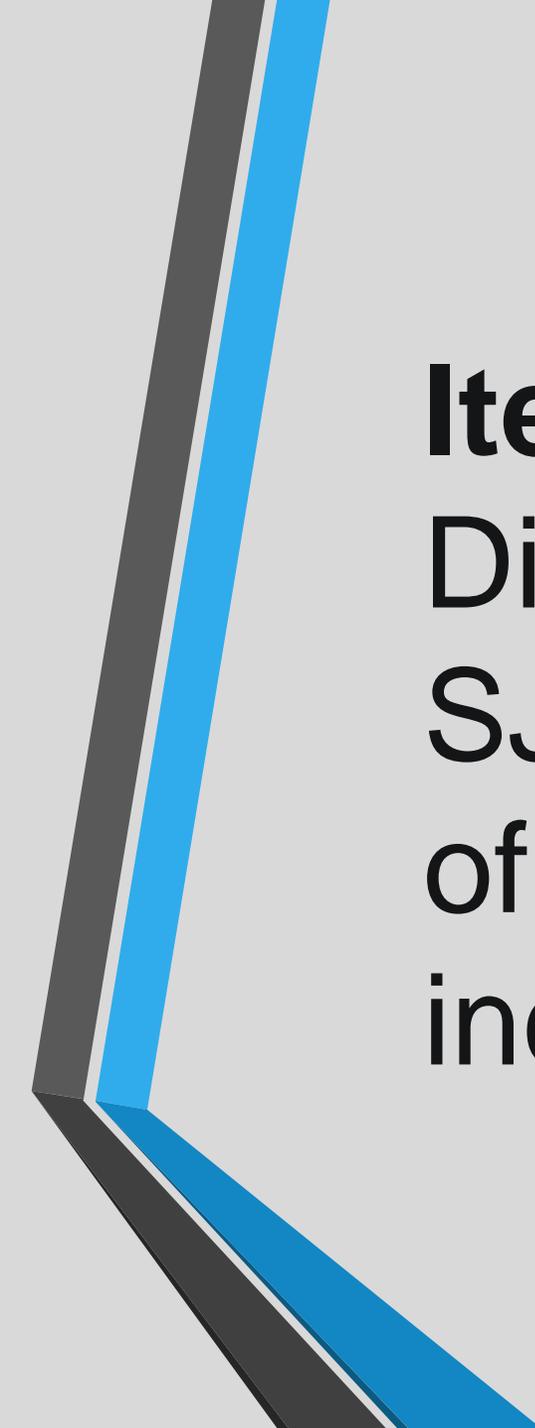
For more information:  
[SanJacFldPG@eng.hctx.net](mailto:SanJacFldPG@eng.hctx.net)  
(713)-274-3914



## **Item 12:**

Update and discussion pertaining to the logistics of in-person RFPG meetings





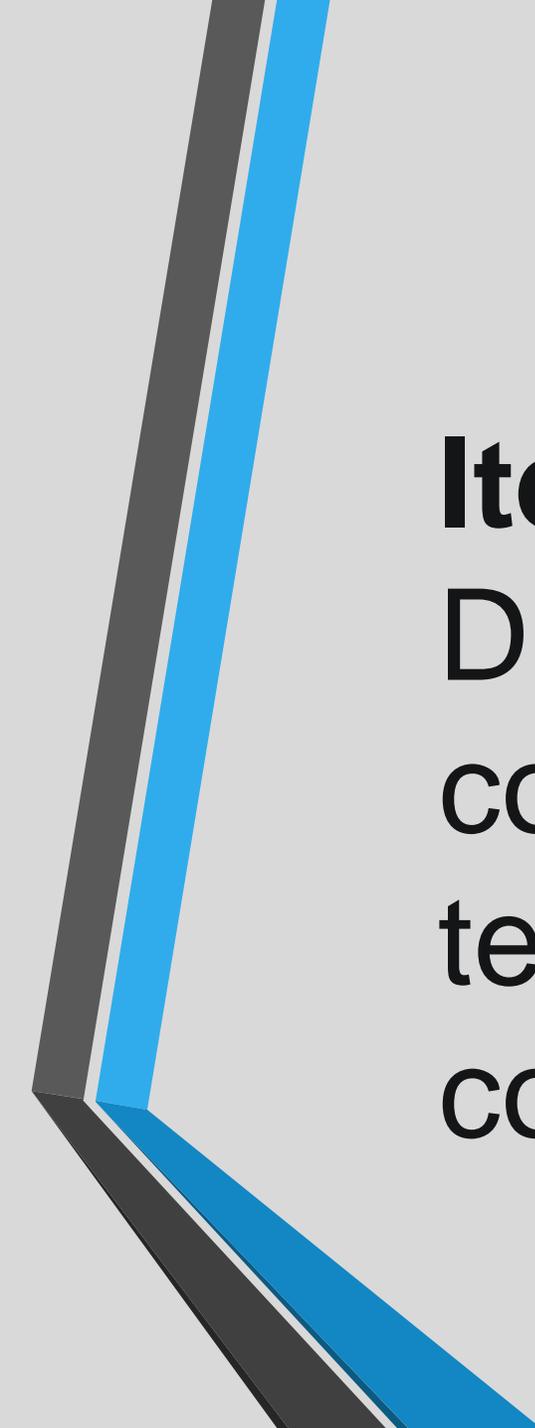
## **Item 13:**

Discussion and update to the SJRFPG concerning development of media request guidance including social media outreach



## **Item 14:**

Update and discussion from the Planning Group Sponsor (Harris County) regarding project grant and budget.



## **Item 15:**

Discussion and possible action concerning the development of technical consultant support committee(s)



**Item 16:**

Presentation from the Harris County  
Flood Control District – San Jacinto  
River Watershed Study Presentation

# SAN JACINTO

## Regional Watershed Master Drainage Plan



### San Jacinto Regional Flood Planning Group Region 8

May 13, 2021



# Goals and Objectives

- The goals of the *San Jacinto Regional Watershed Master Drainage Plan* are to
  - Prepare comprehensive Flood Mitigation Plan to support regional partners
  - Identify vulnerability to flood hazards resulting in loss of life and property
  - Develop approach to enhance public information and flood assessment
  - Evaluate flood mitigation strategies to improve long-term resilience
- The plans specific objectives are:
  - Flood **Mitigation** Planning
  - Flood **Assessment**/Warning Planning
  - Flood **Response** Planning
  - Community **Outreach & Education**

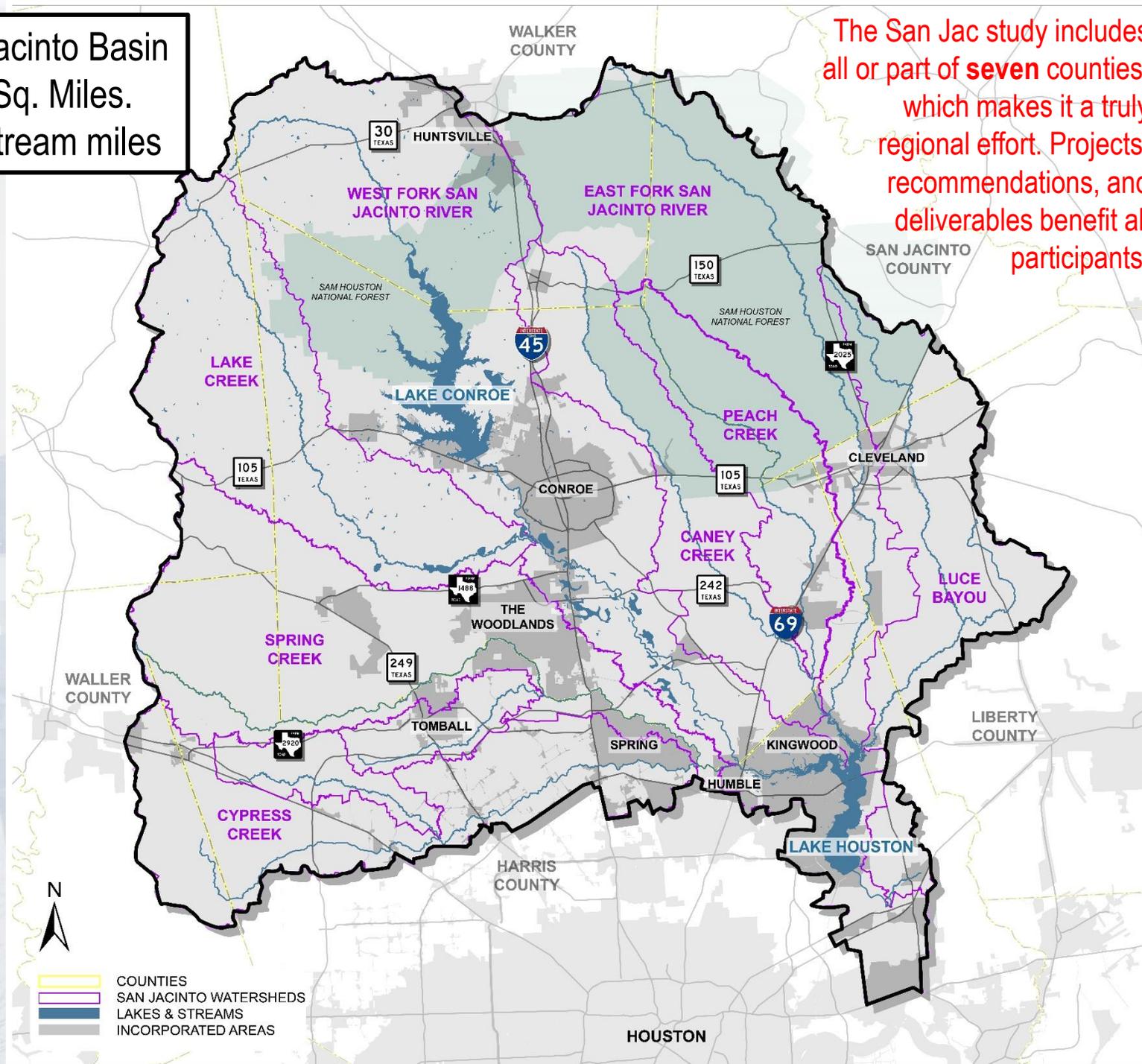
75% HMGP Funded  
25% Local Funded

05/13/2021



San Jacinto Basin  
2880 Sq. Miles.  
535 Stream miles

The San Jac study includes all or part of **seven** counties, which makes it a truly regional effort. Projects, recommendations, and deliverables benefit all participants.



# Recent Flood History



Credit: Community Impact Newspaper

05/13/2021



# Recent Flood History

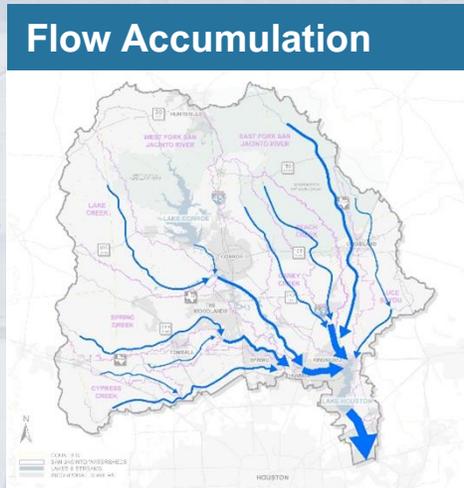
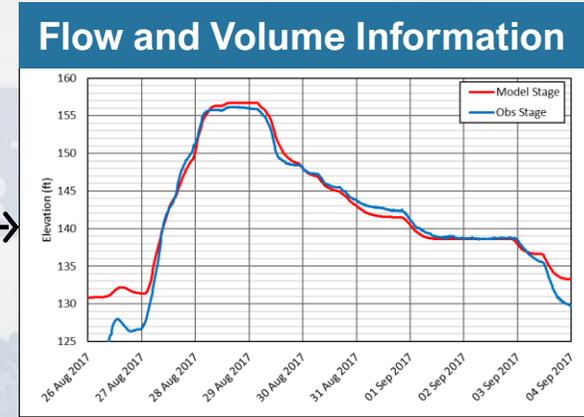
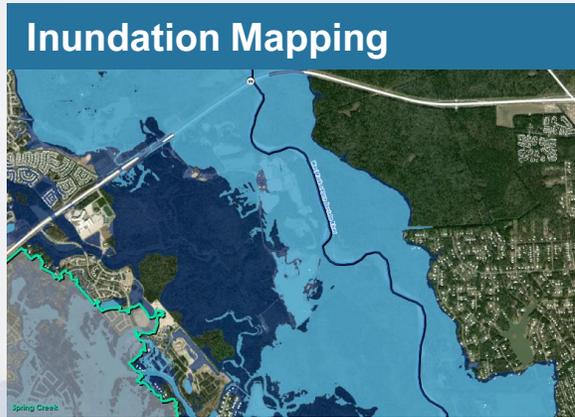


Credit: Community Impact Newspaper

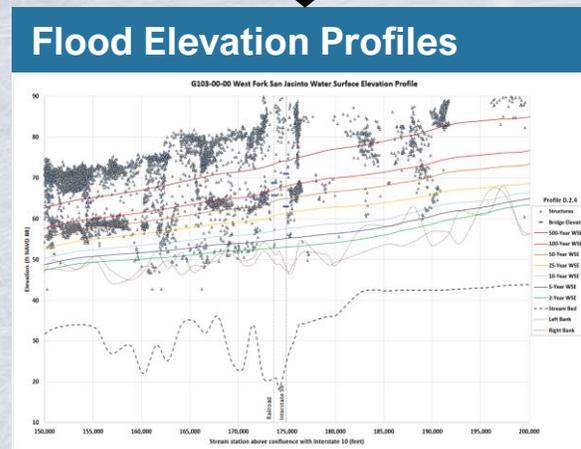
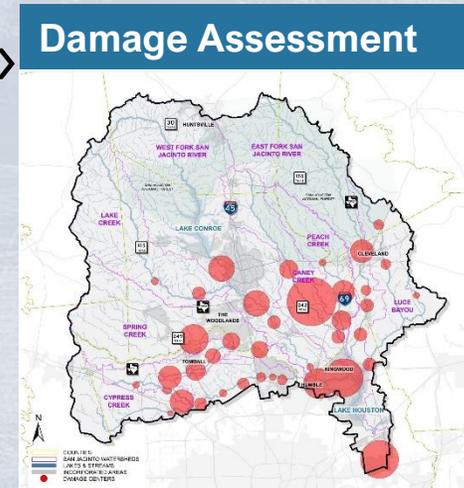
05/13/2021



# Baseline Conditions Modeling



**Flood Modeling**

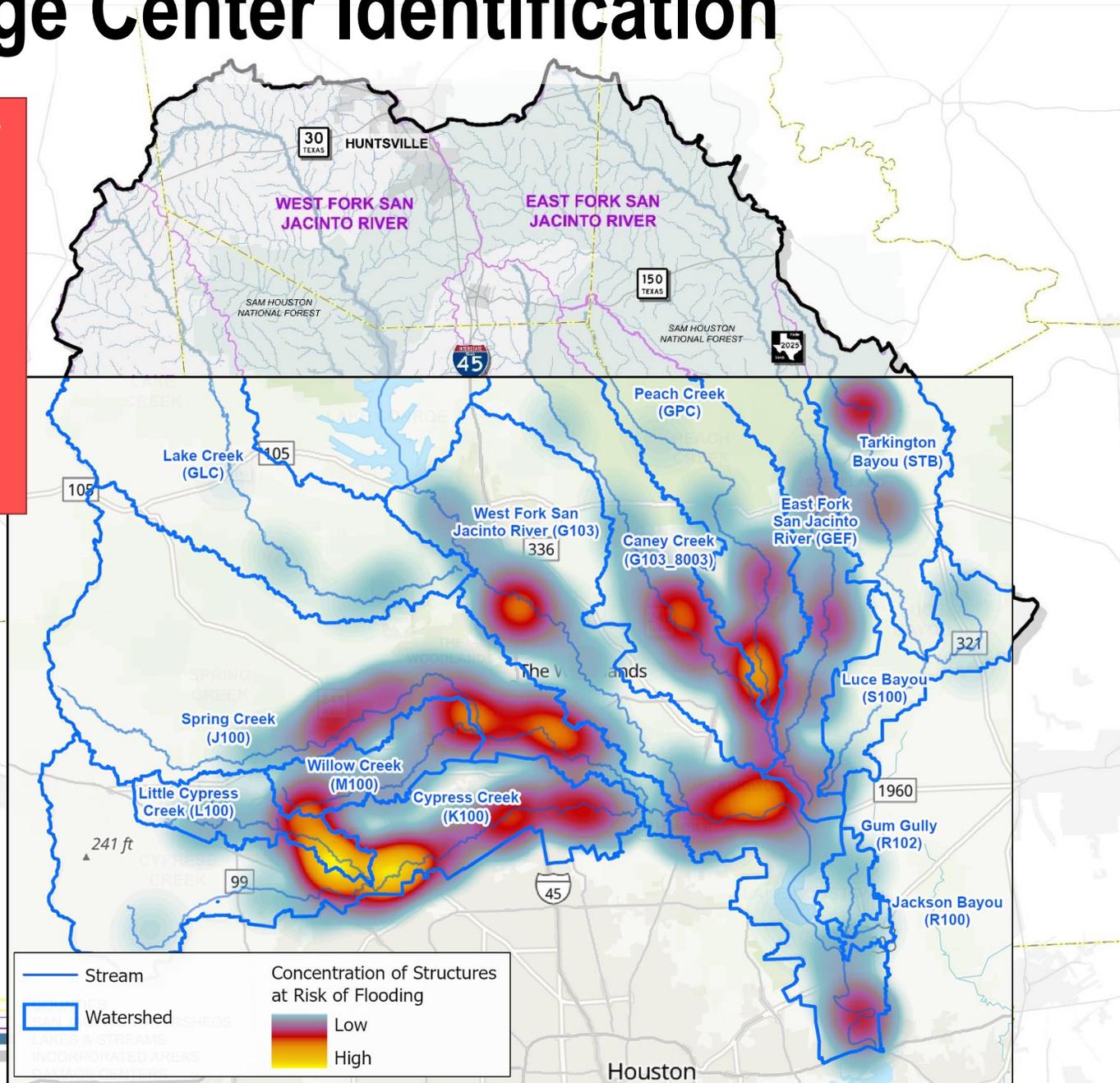


05/13/2021



# Damage Center Identification

Approximately \$2 Billion in expected damages over the next 50 years if no measures are implemented

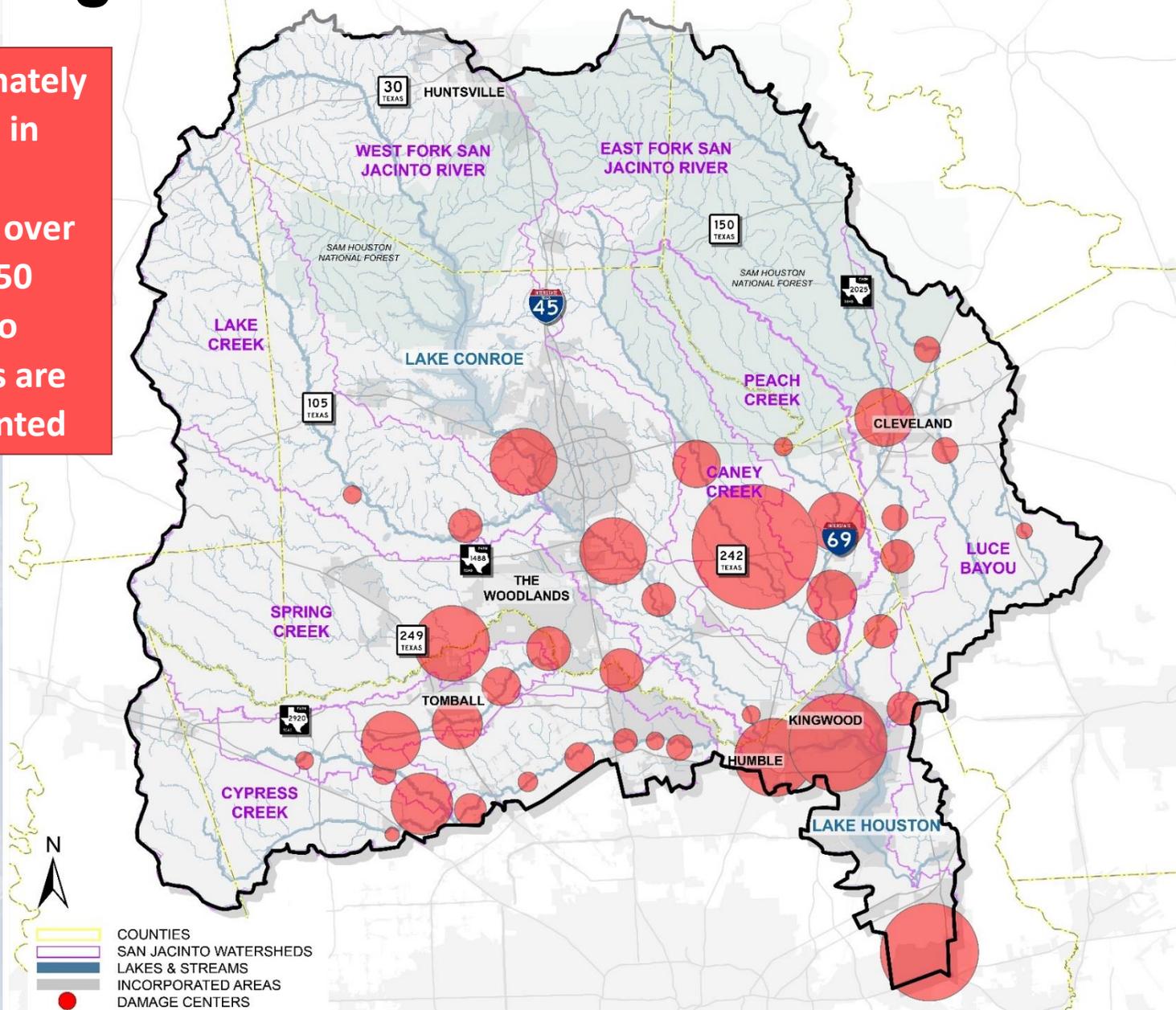


05/13/2021

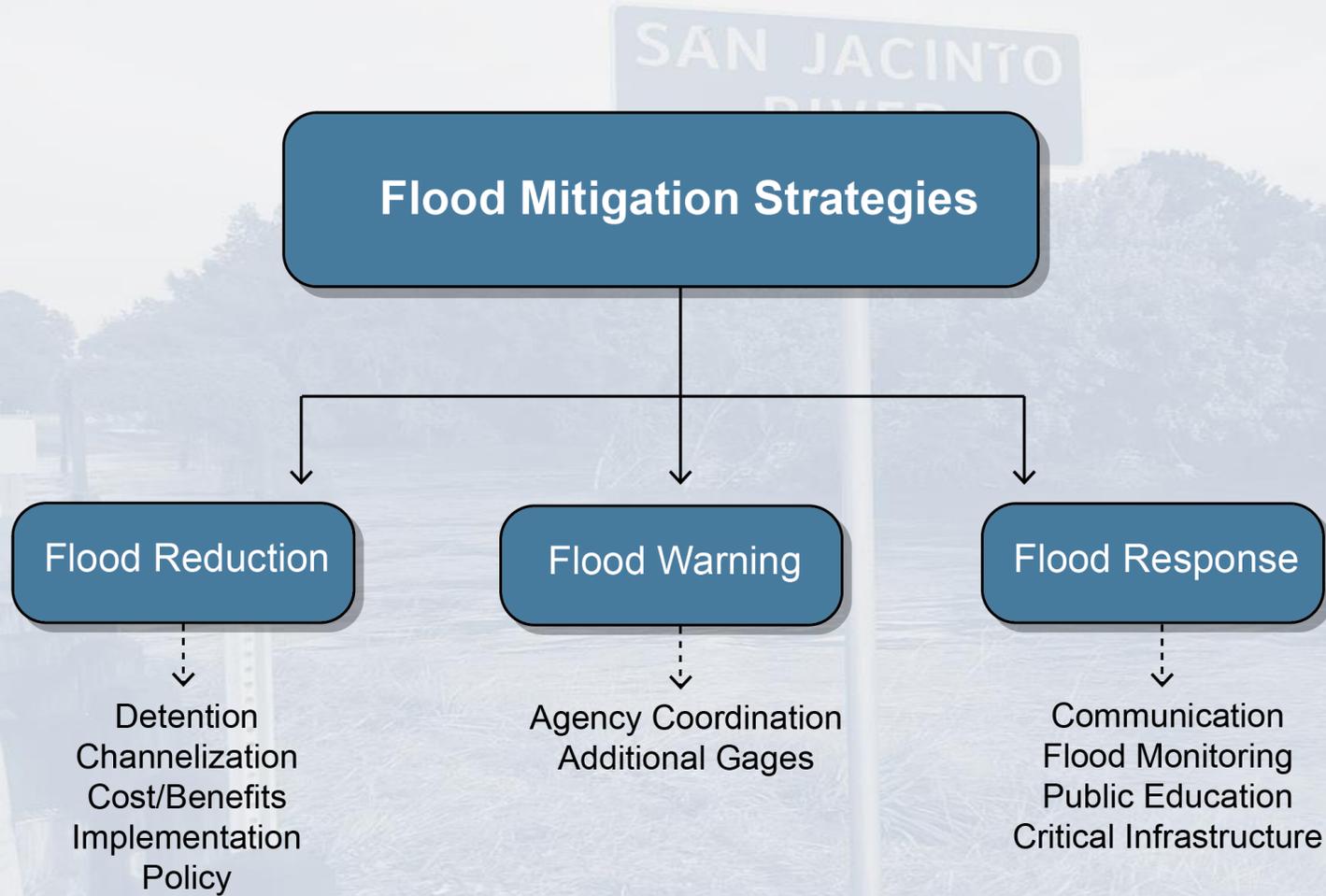


# Damage Center Identification

Approximately \$2 Billion in expected damages over the next 50 years if no measures are implemented



# Flood Mitigation Strategies



05/13/2021

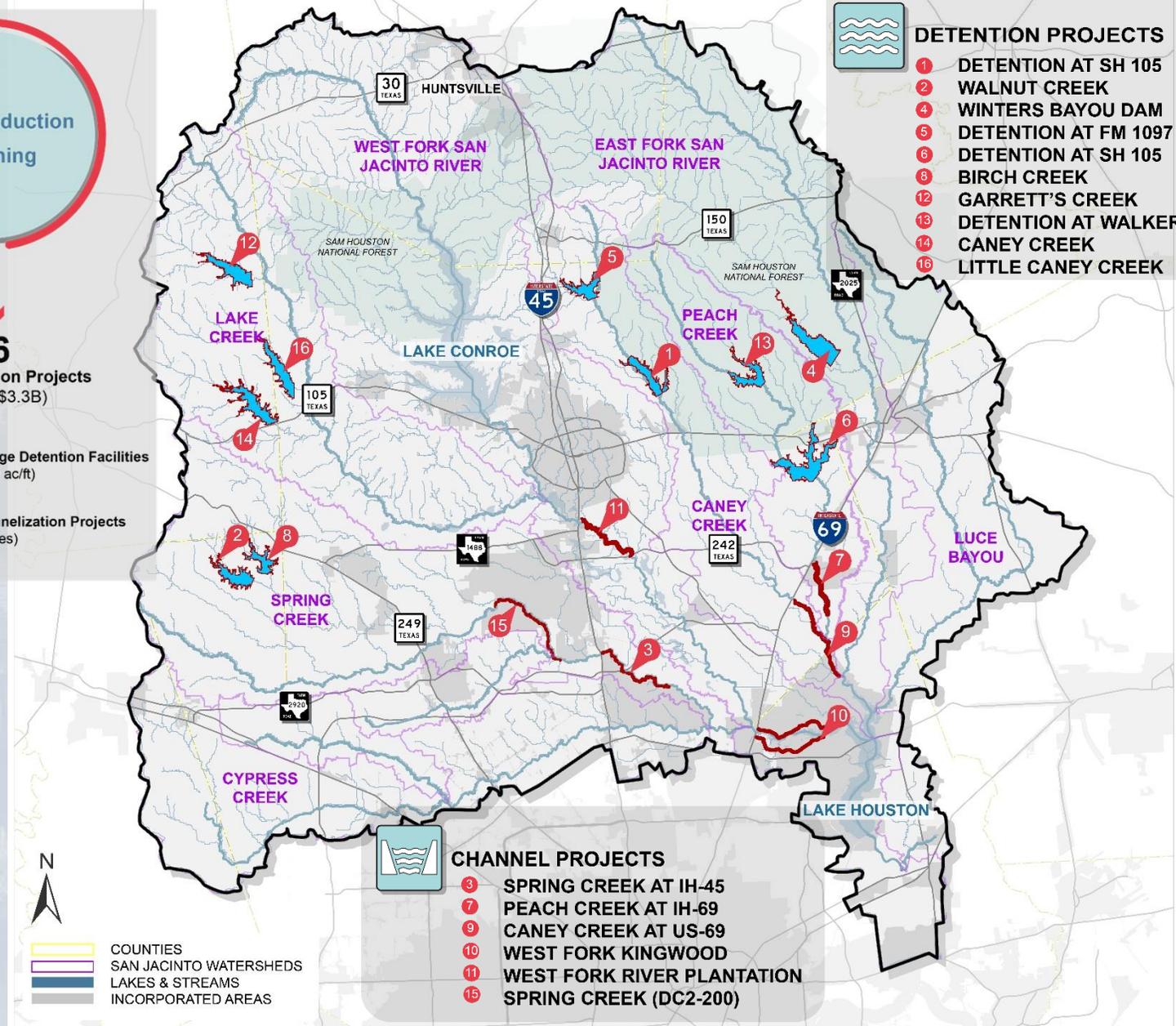


# Flood Reduction Recommendations



**16**  
Flood Reduction Projects  
(\$2.9B - \$3.3B)

- 10** Large Detention Facilities  
(229,000 ac/ft)
- 6** Channelization Projects  
(38.5 miles)



- DETENTION PROJECTS**
- 1 DETENTION AT SH 105
  - 2 WALNUT CREEK
  - 4 WINTERS BAYOU DAM
  - 5 DETENTION AT FM 1097
  - 6 DETENTION AT SH 105
  - 8 BIRCH CREEK
  - 12 GARRETT'S CREEK
  - 13 DETENTION AT WALKER
  - 14 CANEY CREEK
  - 16 LITTLE CANEY CREEK

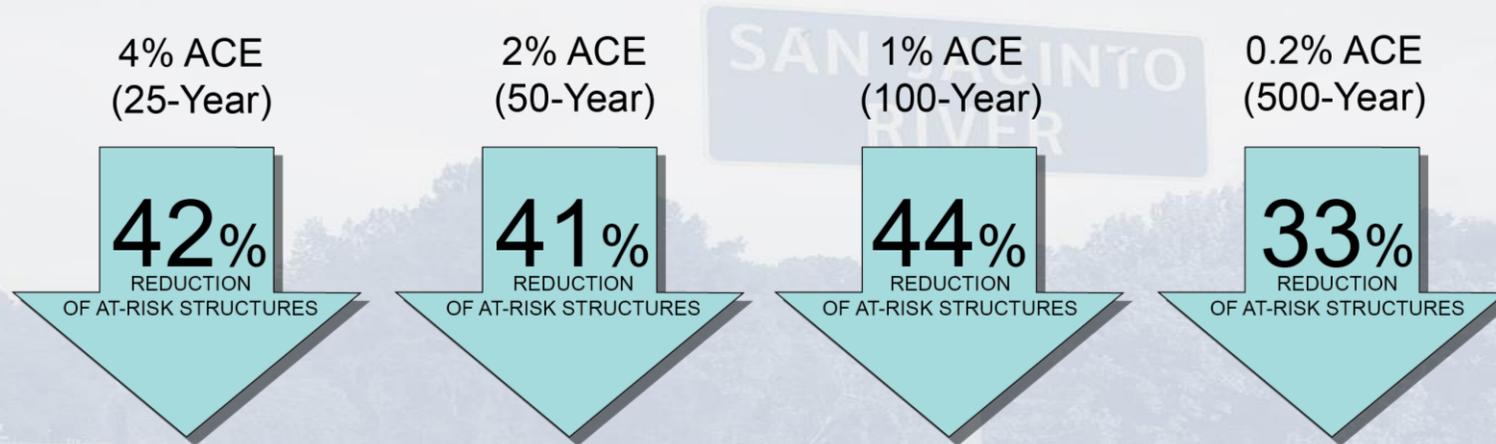
- CHANNEL PROJECTS**
- 3 SPRING CREEK AT IH-45
  - 7 PEACH CREEK AT IH-69
  - 9 CANEY CREEK AT US-69
  - 10 WEST FORK KINGWOOD
  - 11 WEST FORK RIVER PLANTATION
  - 15 SPRING CREEK (DC2-200)

COUNTIES  
 SAN JACINTO WATERSHEDS  
 LAKES & STREAMS  
 INCORPORATED AREAS

05/13/2021



# Flood Reduction Benefits



**Approximately**  
**\$755M**  
**in estimated damage**  
**reduction over the next**  
**50 Years**



# Additional Regional Measures

## Detention Recommendations

- Enact consistent detention policy across jurisdictions
- Require comprehensive impact analysis

## Floodplain Recommendations

- Common criteria for detention and floodplain analysis
- Avoid development in the floodplain where possible
- Acquire floodplain property to prevent development
- Require floodplain fill mitigation to avoid negative impacts



05/13/2021



# Buyouts

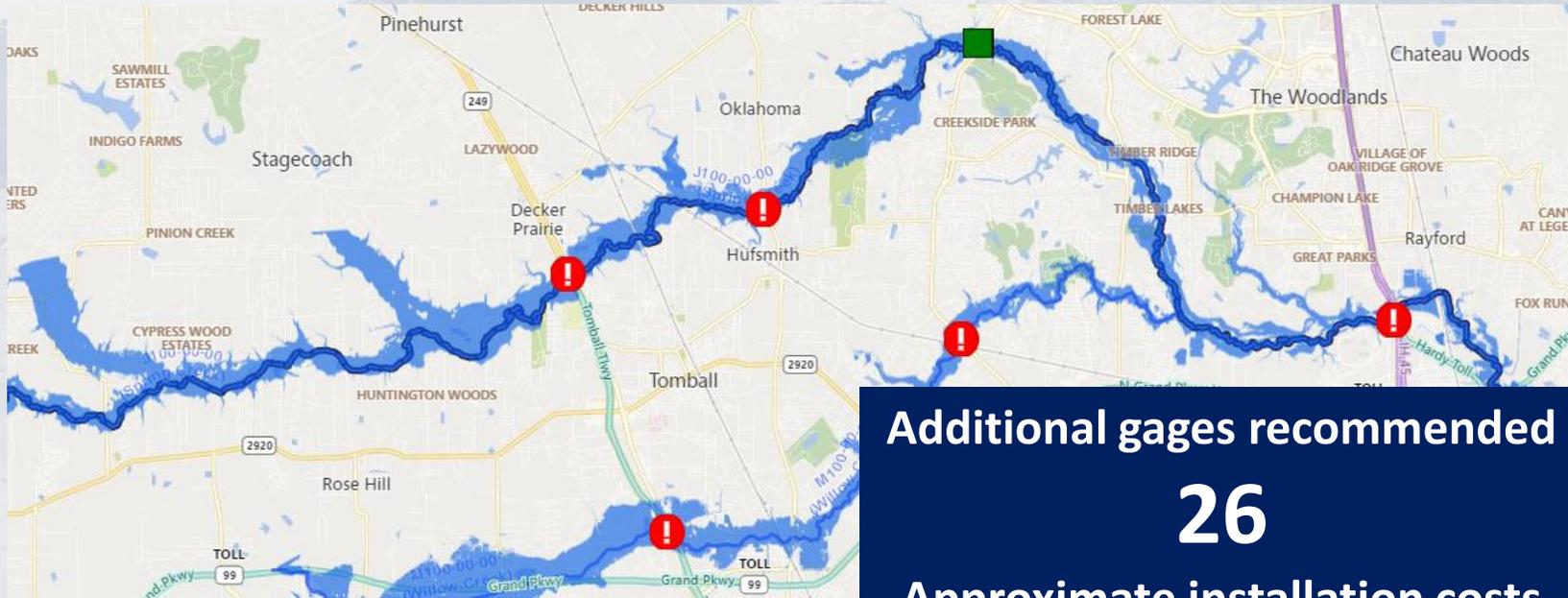
- Structures currently inundated by the 50% (2-Yr) and 20% ACE (5-yr) storms will see benefits, but will continue to flood
- A comprehensive buyout program for frequently flooded structures is needed
- Buyouts are different than specific properties acquired for flood mitigation projects.

**Estimated buyout cost for  
structures currently located in the  
50% and 20% ACE inundation area  
~ \$190M**



# Flood Warning Planning

- Rainfall, Stage, and Discharge Gages
- Early warning and public information during storm events
- Received input from HCFCD, SJRA, MCO, USGS, etc.



Harris County Flood Warning System along Spring Creek during Hurricane Harvey (2017)

<https://www.harriscountyfws.org/>

**Additional gages recommended**

**26**

**Approximate installation costs  
not including maintenance**

**\$250k to \$500k**

05/13/2021



# Flood Response Planning

## Flood Response Recommendations

- Documentation and Staffing
- Communication
- Flood Monitoring and Protection
- Public Education

Many roads in the basin can expect to flood during a major rainfall event.

## 4 Evacuation Routes

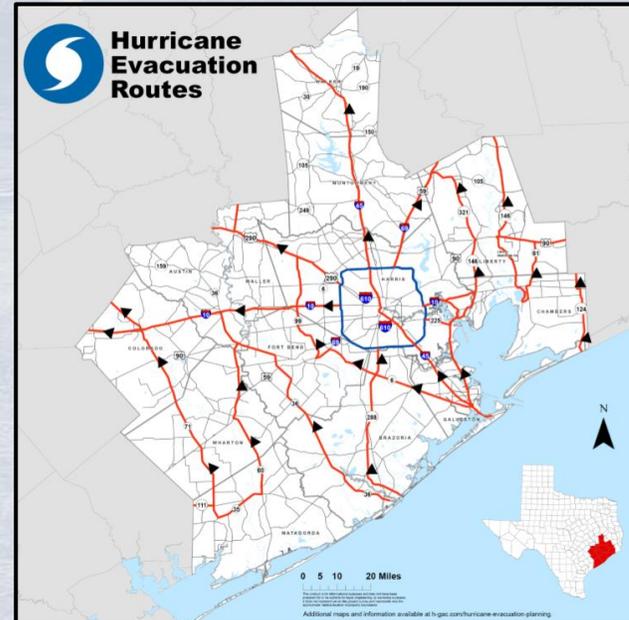
At risk for a 1% ACE event

Critical facilities such as city/county facilities, police, fire, EMS, W/WWTP, hospitals in the San Jacinto Watershed

1460

At risk of flooding during a 0.2% ACE (500-year) storm

239



05/13/2021



# Implementation



05/13/2021



# Short Term Strategies

- San Jacinto River Vision Group
  - Regional group that fosters collaboration among watershed entities
  - The TWDB Regional Flood Planning Group is best suited to fill this role



05/13/2021

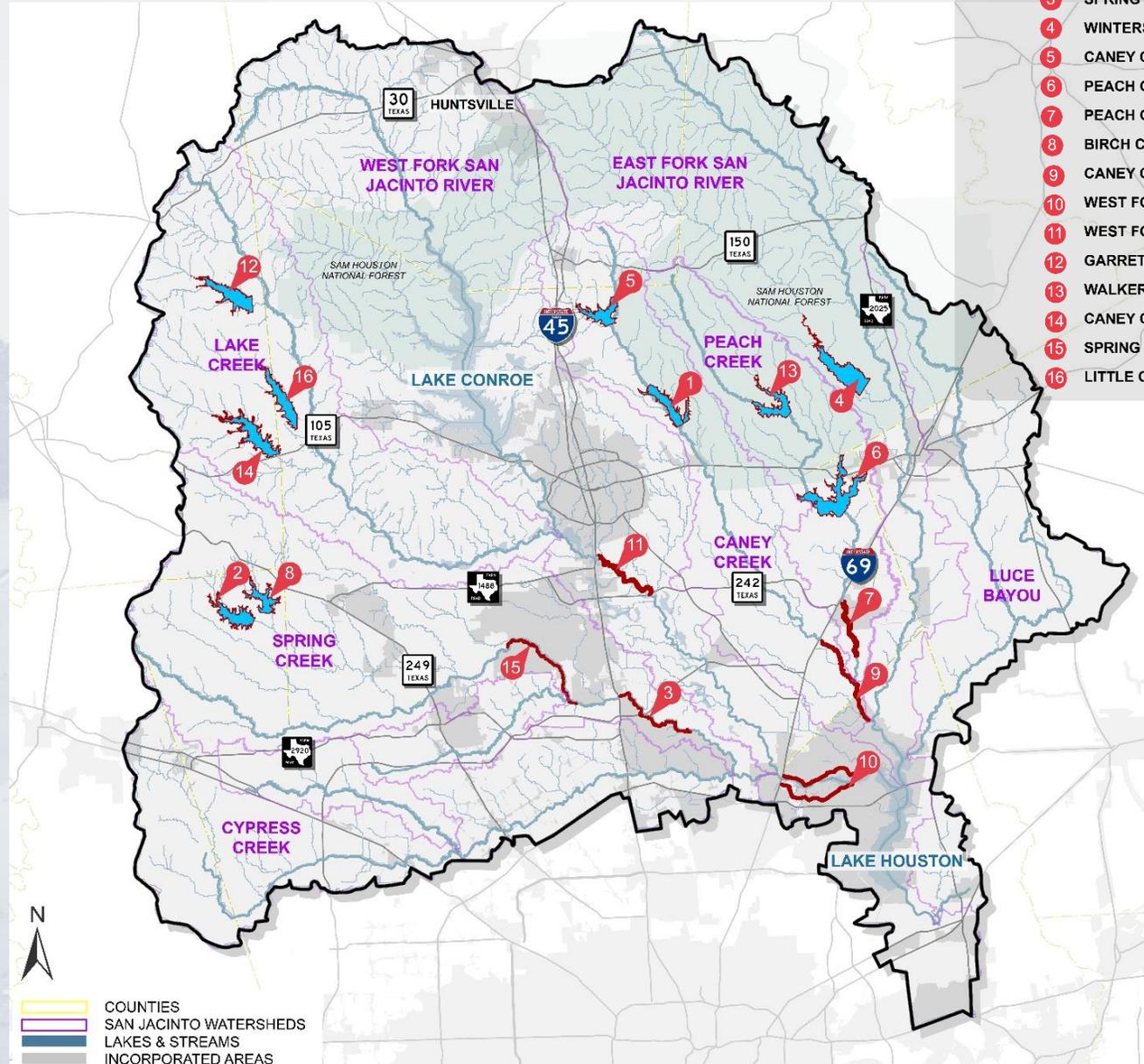


# Long Term Strategies



## LONG-TERM PROJECTS

- 1 CANEY CREEK DETENTION AT SH105 - \$208M
- 2 WALNUT CREEK DETENTION (SPRING) - \$132M
- 3 SPRING CREEK CHANNEL AT IH-45 - \$81M
- 4 WINTERS BAYOU DETENTION (E. FORK) - \$167M
- 5 CANEY CREEK DETENTION AT FM1097 - \$131M
- 6 PEACH CREEK DETENTION AT SH105 - \$433M
- 7 PEACH CREEK CHANNEL AT IH-69 - \$161M
- 8 BIRCH CREEK DETENTION (SPRING) - \$122M
- 9 CANEY CREEK CHANNEL AT IH-69 - \$194M
- 10 WEST FORK CHANNEL AT KINGWOOD - \$848M
- 11 WEST FORK CHANNEL AT RIVER PLANTATION - \$148M
- 12 GARRETT'S CREEK DETENTION (LAKE) - \$131M
- 13 WALKER CREEK DETENTION (PEACH) - \$218M
- 14 CANEY CREEK DETENTION (LAKE) - \$163M
- 15 SPRING CREEK CHANNEL DC2-200 \$54M
- 16 LITTLE CANEY CREEK DETENTION (LAKE) \$128M



**Strategies**

- Detention Storage
- Channel Improvements
- Floodplain Preservation
- Strategies

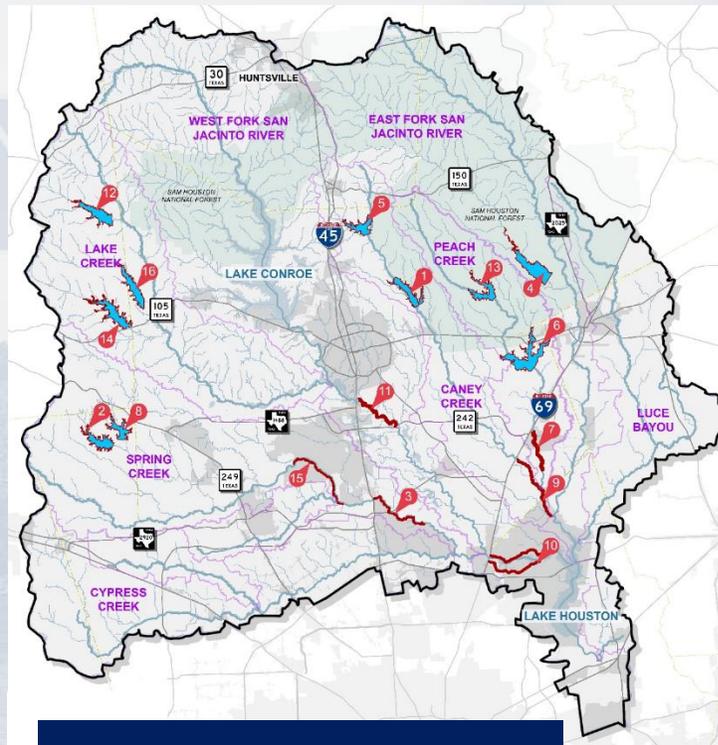


# Long Term Strategies



## LONG-TERM PROJECTS

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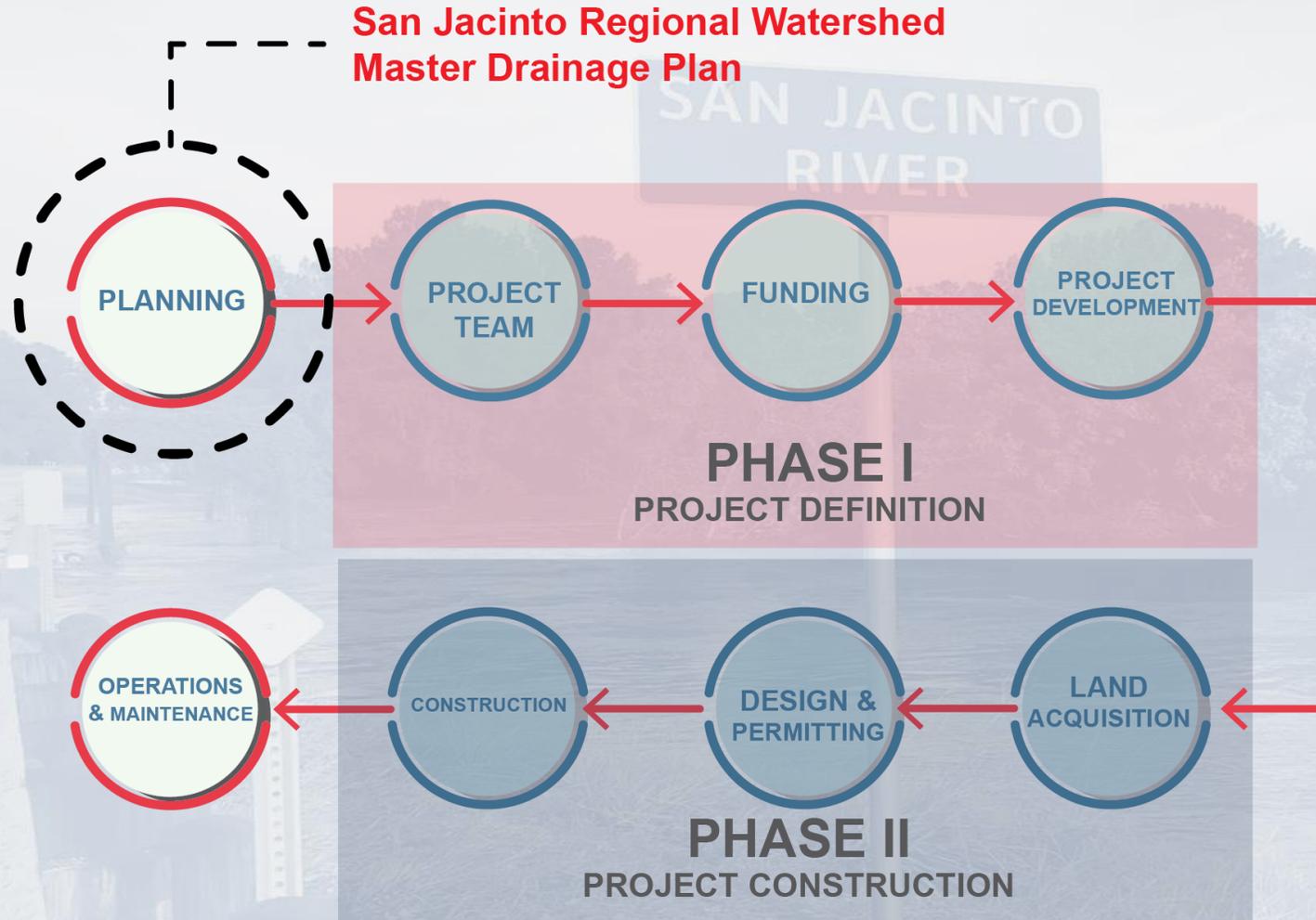
## Scoring Metrics

- Historical Damages
- Calculated Damages
- Flood Reduction Benefits
- Benefit-Cost Ratio
- Low to Moderate Income
- Social Vulnerability
- Project Costs

05/13/2021



# Long Term



Project funding will be a critical consideration at each step along the path to implementation. In addition, consideration of community and natural values is paramount to success.

# How is HARRIS COUNTY FLOOD CONTROL DISTRICT

funded for  
disaster recovery  
& resiliency?



Includes Local Match for Federally Funded Projects



Texas Senate Bills 7/8  
Varies by Project



US Army Corps of Engineers

Varies by Project



United States Department of Agriculture  
Natural Resources Conservation Service

Emergency Watershed Protection Program  
10% Local Match  
Watershed & Flood Prevention Operations  
10% Local Match

Pilot Program



FEMA

\*10% Local Match for Hurricane Harvey

**DAMAGE-RELATED**  
Public Assistance  
10% Local Match  
Section 406  
Varies by Project\*  
Pre-Disaster Mitigation  
25% Local Match  
Hazard Mitigation Grant Program  
25% Local Match  
Flood Mitigation Assistance Program  
25% Local Match

State-level Grantees



Texas Water Development Board



Community Development Block Grants  
0% Local Match

EDA



Disaster Supplemental Notice of Funding Opportunity Grant  
Varies: 20% Local Match for Harvey



Operations & Maintenance

Capital Improvement Program

Existing Federal Projects

Repairs

New Structural Projects

Home Buyout Program

# Communication and Outreach

- Communication
  - Study Partners Meetings
  - Supporting Partners Meetings
  - Executive Briefings
  - Emergency Managers Workshop
  - H-GAC Coordination

- Outreach
  - 1<sup>st</sup> Community Meeting  
December 2019
  - 2<sup>nd</sup> Community Meeting (Virtual)  
August 2020
  - Stakeholder Meetings (Jul/Aug)
  - Study Website

[www.sanjacstudy.org](http://www.sanjacstudy.org)

SAN JACINTO RIVER



FREQUENTLY ASKED QUESTIONS

**SAN JACINTO REGIONAL WATERSHED MASTER DRAINAGE PLAN**

**STUDY FACT SHEET** SUMMER 2020

**What is the SJMDP Study?**

The San Jacinto River Regional Watershed Master Drainage Plan (SJMDP) is a comprehensive regional study led by local study partners including the Harris County Flood Control District, Montgomery County, the City of Houston, and the San Jacinto River Authority. As extreme weather events and flood waters do not recognize jurisdictional boundaries, like county and city limits, the four study partners are working together to address flooding as a regional issue.

This comprehensive study developed a set of hydrologic and hydraulic (H&H) models for the major tributaries of the Upper San Jacinto River regional watershed that will provide a technical basis as a resource for local, state, and federal agencies to identify flooding vulnerabilities for existing infrastructure and impacts from future growth to improve flood resiliency in the watershed. The models developed for this study use consistent, cohesive methodology and rainfall rates, regardless of the county in which those channels are located. Potential projects supported by the results of this study are intended to reduce flood risks to people and property located throughout the watershed service area resulting in safer, more resilient communities.

Information developed includes non-regulatory **inundation maps** (not intended to replace current effective maps) for the studied streams that show the extent and depth of **riverine flooding** for the larger rivers within the watershed for an array of simulated storm events. Additionally, information was gathered about the number of structures, acres of land, properties, and miles of roadway that are located within the modeled floodplains.

**Study Goals**

The goals of the SJMDP are to:

- Identify the region's vulnerabilities to flood hazards using Atlas 14, the most current rainfall data developed by the National Oceanic and Atmospheric Administration (NOAA).
- Develop approaches to enhance public information and flood level assessment capabilities during a flood disaster event.
- Evaluate flood mitigation strategies to improve community resilience; and
- Provide a comprehensive Flood Mitigation Plan that supports the needs and objectives of each regional partner.

**KEY STUDY TERMS**

**Watershed:** A geographical region of land or "drainage area" that drains to a common channel or outlet, mostly creeks and baysou. Drainage of the land can occur directly into a bayou or creek, or through a series of systems that may include storm sewers, roadside ditches, and/or tributary channels.

**Inundation maps:** Maps that show where flooding may occur over a range of water levels in a community's local stream or river.

**Riverine Flooding:** Flooding that is the result of creeks and bayous leaving their banks due to heavy rainfall.

**Headwaters:** Headwaters are simply the initial source of the water in a river.

**Hazard Mitigation Plans:** Hazard mitigation is the effort to reduce loss of life and property by lessening the impact of disasters, such as flooding. Government organizations engage in hazard mitigation planning to identify risks and vulnerabilities associated with natural disasters, and develop long-term strategies for protecting people and property. Mitigation plans are key to breaking the cycle of disaster damage, reconstruction, and repeated damage.

SAN JACINTO REGIONAL WATERSHED MASTER DRAINAGE PLAN FACT SHEET | Summer 2020 Page 1 of 4



# Contact Information

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- Harris County Flood Control District
  - Jing Chen, P.E., CFM | (346) 286-4264 | [jing.chen@hcfcd.hctx.net](mailto:jing.chen@hcfcd.hctx.net)
- San Jacinto River Authority
  - Matt Barrett, P.E. | (936) 588-7177 | [mbarrett@sjra.net](mailto:mbarrett@sjra.net)
- City of Houston
  - Adam Eaton, P.E., ENV SP | (832) 395-3082 | [Adam.Eaton@houstontx.gov](mailto:Adam.Eaton@houstontx.gov)
- Montgomery County
  - Darren Hess | (936) 523-3901 | [Darren.Hess@mctx.org](mailto:Darren.Hess@mctx.org)

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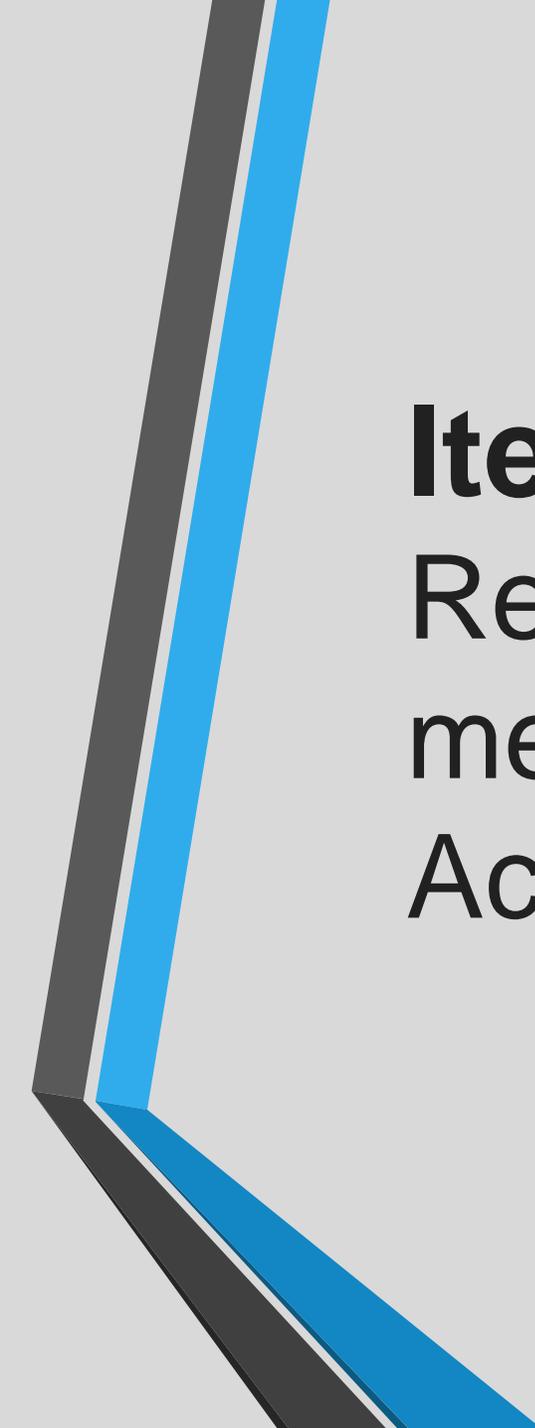


## **Item 17:**

Presentation of 2021 Planning Group  
key dates and deadlines

a. Upcoming planning schedule  
milestones

b. The next San Jacinto RFPG  
meeting will be on June 11, 2021  
at 9:00 am.



## **Item 18:**

Reminder regarding Planning Group member training on Public Information Act and Open Meetings Act



**Item 19:**

Consider agenda items for next meeting



## **Item 20:**

Public comments – limit 3 minutes  
per person



**Item 21:**  
Adjourn